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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/824,843	04/15/2004	Robert J. Kansy	RFMI01-00227	6859

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EXAMINER
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LE, NHAN T

ART UNIT	PAPER NUMBER
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2618

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/09/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/824,843

Applicant(s)

KANSY, ROBERT J.

Examiner

Nhan T. Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-5, 7-9, 11-17, 21-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamgar et al (US 6,324,387) in view of Darabi et al (US 6,691,552) further in view of Talmola et al (US 6,822,696).

As to claims 1, 7, 15, Kamgar teaches a circuit, comprising: one first amplifier operable to amplify an incoming signal to produce an amplified incoming signal (see fig. 1, number 105, col. 2, lines 55-67, col. 3, lines 1-20), the incoming signal associated with a desired signal (see col. 2, lines 55-67, col. 3, lines 1-20); and a controller operable, in response to a first threshold of the amplified signal (see fig. 1, number 110, 150, col. 2, lines 55-67, col. 3, lines 1-20, col. 4, lines 54-61) and the second threshold of the desired signal (see fig. 1, number 110, 155, col. 2, lines 55-67, col. 3, lines 1-20, col. 4, lines 54-61). Kamgar fails to teach the controller operable, in response to the amplified signal exceeding the first threshold and the desired signal not exceeding the second threshold, allow one amplifiers to amplify the incoming signal and increase a current supplied to the one or more first amplifiers. Darabi teaches the

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controller operable, in response to the amplified signal exceeding the first threshold and the desired signal not exceeding the second threshold, allow one amplifiers to amplify the incoming signal (see fig. 3, numbers 328, col. 8, lines 23-65). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Darabi into the system of Kamgar in order to control the gain optimizing the signal amplification for best sensitivity and best linearity. The combination of Kamgar and Darabi fails to teach increasing a current supplied to the one or more first amplifiers based on the first and the second threshold levels. Talmola teaches the controller controlling the bias current of the RF amplifiers based on the first and second threshold level in which the current can be increased or decreased (see col. 3, lines 4-37). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Talmola into the system of Kamgar and Darabi in order to reduce the power consumption of the receiver.

As to claims 2, 8, the combination of Kamgar, Darabi and Talmola teaches a first comparator (see Kamgar fig. 1, number 110, 150, col. 2, lines 55-67, col. 3, lines 1-20, col. 4, lines 54-61) operable to compare the amplified incoming signal to the first threshold; and a second comparator (see Kamgar fig. 1, number 110, 155, col. 2, lines 55-67, col. 3, lines 1-20, col. 4, lines 54-61) operable to compare the desired signal to the second threshold.

As to claims 3, 16, the combination of Kamgar, Darabi and Talmola teaches a filter (see Kamgar fig. 1, number 125, col. 2, lines 55-67, col. 3, lines 1-20) operable to filter the incoming signal to produce a filtered incoming signal; and wherein the one first

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amplifier (see Kamgar fig. 1, number 105, col. 2, lines 55-67, col. 3, lines 1-20) are operable to amplify the filtered incoming signal to produce the amplified incoming signal.

As to claims 4, 9, 17, the combination of Kamgar, Darabi and Talmola teaches a mixer (see Kamgar fig. 1, number 130, col. 3, lines 58-65) operable to perform a mixing operation involving the amplified incoming signal to produce a mixed incoming signal; a filter (see Kamgar fig. 1, number 125, col. 2, lines 55-67, col. 3, lines 1-20 ) operable to filter the mixed incoming signal to produce a filtered mixed incoming signal, a third amplifier (see Darabi fig. 3, numbers 316a, 316b, col. 8, lines 23-65) operable to amplify the filtered mixed incoming signal to produce the desired signal

As to claim 5, the combination of Kamgar, Darabi and Talmola further teaches wherein the filter comprises a bandpass filter (see Kamgar fig. 1, number 125, col. 3, lines 11-20).

As to claims 11-14, the claims are rejected as to claim 1.

As to claims 21, 23, 25, the combination of Kamgar, Darabi and Talmola teaches wherein the controller is operable, in response to the amplified incoming signal exceeding the first threshold (see Kamgar fig. 1, number 110, 150, col. 2, lines 55-67, col. 3, lines 1-20, col. 4, lines 54-61) and the desired signal not exceeding the second threshold (see Kamgar fig. 1, number 110, 155, col. 2, lines 55-67, col. 3, lines 1-20, col. 4, lines 54-61), to allow the one or more second amplifiers to amplify the incoming signal (see Darabi fig. 3, numbers 328, col. 8, lines 23-65).

As to claims 22, 24, 26, the combination of Kamgar, Darabi and Talmola teaches wherein the controller is operable, in response to the amplified incoming signal

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exceeding the first threshold (see Kamgar fig. 1, number 110, 150, col. 2, lines 55-67, col. 3, lines 1-20, col. 4, lines 54-61) and the desired signal not exceeding the second threshold (see Kamgar fig. 1, number 110, 155, col. 2, lines 55-67, col. 3, lines 1-20, col. 4, lines 54-61), to increase the current supplied to the one or more first amplifiers (see Darabi col. fig. 3, numbers 328, col. 8, lines 23-65).

2. Claims 6, 10, 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamgar et al (US 6,324,387) in view of Darabi et al (US 6,691,552); Talmola et al (US 6,822,696) further in view of Dvorkin et al (US 6,249,686).

As to claims 6, 10, 18, the combination of Kamgar, Darabi and Talmola fails to teach a switch coupling a power supply to at least one of the one or more first amplifier and the controller operable to open and close the switch. Dvorkin teaches switch coupling power supply to at least one of the one or more first amplifier and the controller operable to open and close the switch (see fig. 1, Vcc, 30, 70, 12, 42, 78, col. 3, lines 34-67, col. 4, lines 1-15). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Dvorkin into the system of Kamgar, Darabi and Talmola in order to switch between different modes of operation.

As to claims 19-20, the combination of Kamgar, Darabi, Talmola and Dvorkin teaches determining whether at least one of the amplified incoming signal no longer exceeds the first threshold and the desired signal exceeds the second threshold (see Kamgar fig. 1, number 110, 150, 155, col. 2, lines 55-67, col. 3, lines 1-20, col. 4, lines 54-61); and in response to determining that the amplified incoming signal no longer

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exceeds the first threshold or the desired signal exceeds the second threshold, at least one of no longer allowing the one or more second amplifiers to amplify the incoming signal; and decreasing the current supplied to the one or more first amplifiers (see Darabi see fig. 3, number 318, col. 2, lines 46-67, col. 3, lines 1-33; Dvorkin col. 3, lines 4-37); wherein no longer allowing the one or more second amplifiers to amplify the incoming signal and decreasing the current supplied to the one or more first amplifiers comprises opening the switch (see Dvorkin fig. 1, Vcc, 30, 70, 12, 42, 78, col. 3, lines 34-67, col. 4, lines 1-15).

### ***Response to Arguments***

3. Applicant's arguments with respect to claims 1-26 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nhan T Le whose telephone number is 571-272-7892. The examiner can normally be reached on 08:00-05:00 (Mon-Fri).

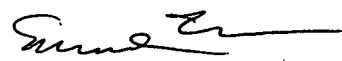
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on 571-272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Nhan Le



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